

## ABSTRACT

5 A high frequency filter design for the GHz frequency range is provided. The high frequency filter comprises at least a microstrip design that incorporates both transverse and lateral couplings between the filters resonators. The high frequency filter further incorporates an opened or fully enclosed enclosure over the strip line or microstrip circuitry and may be manufactured on a relatively thick dielectric substrate having a thickness that is greater than about a twentieth of the filter's band-pass wavelength in the dielectric substrate. The high frequency filter design provides a small, easily reproducible filter design better than prior art microstrip filters.